```
==============================================================
Sequence Listing was accepted.
If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).
Reviewer: markspencer
Timestamp: [year=2009; month=9; day=25; hr=13; min=58; sec=42; ms=681; ]
==============================================================
```

Application No:     10584451                Version No:          2.0

Input Set:

Output Set:

Started:        2009-09-11 21:04:37.818
Finished:       2009-09-11 21:04:39.207
Elapsed:        0 hr(s) 0 min(s) 1 sec(s) 389 ms
Total Warnings:     10
Total Errors:       0
No. of SeqIDs Defined:   16
Actual SeqID Count:      16

Error code     Error Description

W   213        Artificial or Unknown found in <213>  in SEQ ID (7)

W   213        Artificial or Unknown found in <213>  in SEQ ID (8)

W   213        Artificial or Unknown found in <213>  in SEQ ID (9)

W   213        Artificial or Unknown found in <213>  in SEQ ID (10)

W   213        Artificial or Unknown found in <213>  in SEQ ID (11)

W   213        Artificial or Unknown found in <213>  in SEQ ID (12)

W   213        Artificial or Unknown found in <213>  in SEQ ID (13)

W   402        Undefined organism found in <213>  in SEQ ID (14)

W   402        Undefined organism found in <213>  in SEQ ID (15)

W   402        Undefined organism found in <213>  in SEQ ID (16)

<400>   1
cggcgcgtcg gtgtctttga ttccactgat caccgcctcg ccatatgctc atcgtggtcc        60

aacgcgaccc ccctccccca aaggcaagcg agacgtatcg accatgccgt ctgcccgcat       120

ctgtgcttaa caagcgagcc aggtgtccct tccgcagctc cgaatctttc gcgtggcgcc       180

acacactgta tgagcgtcac taccgttgta tacctcagac cacttcccgc cgcccctcta       240

cccttctaca cgcctacaca cacatatgta tacatgaaca tctctcagca cacaacgcac       300

acatactgtg accggtatta ctgcaccaac gtctacctct tccacgatgc acccttctac       360

tgtgcggcgt gaggcggagc gggtgaaggt gtcggtgcgc gtgcgccccc tcaacgaccg       420

tgaaaacaat actgccgaag gggcgaaagt caccgtcgcg gcgaaacagg cggcggccgt       480

ggtaaccgtc aagttcatgg gaggcaccag caacagctgc cccgccgagt cgggggggctgc       540

gaggcgggta acgcaggact tccagttcga ccacgtgttc tggtctctgg agacgccgga       600

cgcgtgtggc gcgacccctg cgacgcaggc agacgtgttc cggacgatcg ggtacccgct       660

ggtgcagcac gcgttcgacg ggttcaactc gtgcctgttt gcgtacgggc agacggggag       720

cgggaagacg tacacgatga tgggtgcgga cgtgagcgcg cttagcggtg agggcagcgg       780

cgtgacgccg cggatctgcc tggagatctt tgcgcggaag gcgagcgtgg aggcacaggg       840

gcactcgcgg tggattgtgg agcccgggta cgtggaggtg tacaacgagc gcgtgtcgga       900

cctgcttggg aagcggaaga agggcgcgaa gggcggcatc gaggaggtgt acgtggacgt       960

gcgcgagcac ccgagccgcg gcgtgttcct ggaggggcag cggctggtgg aggttgggag     1020

cctggacgat gttgtgcggc tgatcgaggc cggcaacagc gtgcggcaca cggcctcgac     1080

gaagatgaac gaccggagca gccgtagcca cgcgatcatc atgctgctgc tgcgcgagga     1140

gcggacgatg acgacgaagg gcggagagac gatccgtact gccggcaaga gcagccgcat     1200

gaaccttgtg gaccttgcgg ggtctgagcg cgtggcgcag tcgcaggtgg agggacagca     1260

gttcaaggag gcgacgcaca tcaacctgtc gctgacgacg ctcgggcgtg tgatcgacgt     1320

gctcgcggac atggcaacga agggcgcgaa aacacagtac agcgttccgc cgttccgcga     1380

ctcgaagctg acgttcatcc tgaaggactc gcttggcggg aactcgaaga cgttcatggt     1440

tgcgactgtg agcccgagcg cgctgaacta cgaggagacg ctgagcacgc tgcggtacgc     1500

gtcgcgcgcg cgcgacattg tgaacgttgc gcaggtgaac gaggacccgc gcgcgcgtcg     1560

gatccgcgag ctggaggagc agatggagga catgcggcag gcgatggctg gcggtgaccc     1620

cgcgtacgtg tctgagctga agaagaagct tgcgctgctg gagtcggagg cgcagaagtg     1680

tgcggcggac ctgcaggcgc tagagcggga gcgggagcac aaccaggtgc aggagcggct     1740

gctgcgcgcc acggaggcgg agaagagcga gctggagtcg cgtgcggctg cgctgcagga     1800

ggagatgacc gcgacgcgac agcaggcaga caagatgcag gcgctaaacc ttcggctgaa     1860

ggaagagcag gcgcgcaagg agcgagagct actgaaagag atggcgaaga aggacgccgc     1920

gctctcgaag gttcggcggc gcaaggatgc cgagatcgca agcgagcgcg agaagttgga     1980

gtcgaccgtg gcgcagcttg agcgtgaaca gcgcgagcgc gaggtcgctc tggacgcatt     2040

gcagacgcac cagagaaagc tgcaggaagc gctcgagagc tctgagcgga cagccgcgga     2100

aagggaccag cttctgcagc agcttacaga gcttcagtct gagcgtgcgc agctatcaca     2160

ggttgtcagc gaccgcgagc ggctgacccg cgacttgcag cgtattcagt ccgagtacgg     2220

ggaaacggag ctcgcgcgag acgcggcgct gtgcgccgca caggagatgg aggcgcgcta     2280

tcacgctgct gtgtttcacc tgcaaacgct cctggagctc gcaaccgagt gggaggatgc     2340

gctccgcgag cgtgcgcttg cagagcgtga cgaagccgct gcagctgaac ttgatgccgc     2400

agcttctact tctgaaaacg cacgggaaag cacttccaag ctgctaacca gcgttgagca     2460

gcagcttcgt gaatccgagg cgcgcgctgc ggagctgaaa gccgagctgg aggccactgc     2520

tgctgcgaag acgtcggtgg agcaggagcg tgagaagacg aggacggctc tggaggggcg     2580

cgctgcggag ctggctcgca aactggaggc gactgcttct gcgaagaatt tggtagagca     2640

```
ggaccgcgag aggacgaggg ccaccttgga ggaacgactt cgtattgctg aggtgcgcgc          2700

tgcggagctg gcaggagtgc tggaggccac tgctgctgcg aagacggcgg tggagcagga          2760

gcgtgagagg acgagggccg ccttggagca gcagctccgc gaatccgagg cgcgcgctgc          2820

ggagctggct cgcgcagctgg aagccgctgc tgcggcgaag acgtcggtgg agcaggagcg          2880

tgagaacacg agggccacct tggaggagcg gttgcggctc gctgaggtcc gcgctgcgga          2940

gctggcagcg cggctaaaga gcactgctgc tgttaagtcc gcgatggagc aggaccgcga          3000

gaacacgagg gccacg                                                         3016


<210>  2
<211>  2937
<212>  DNA
<213>  Leishmania donovani

<400>  2
cggcgcgtcg gtgtctttga ttgcacagct caccgcctcg ccatattttc gtcgtggcca            60

cgcgaccccc cgaccttccc ctcctccgcc cccaaagaca agccagacat accgaccatg           120

ccgtctgccc gcgtctctgc ttaccaagcg cgccacgcac cccttcctcg gccctgaatc           180

tttcgcgcgg cgccatacat tgcatgcacg tcactacgcc tgtacacctt acacctcctc           240

ttgcccaccc cttt cccctt ctacacgcct aactacacac acacacatat atatatataa          300

agcgctcaac gcacacatac tgtggccagt attactgcac caacgtctgc ctcttccagg           360

atgcaccctt ccactgtgcg gcgtgaggcg gagcgggtga aggtgtcggt gcgcgtgcgc           420

cccctaaacg aacgtgaaaa caatgccccg gaagggacga aagtgaccgt tgcggcgaaa           480

caggcggccg ccgtggtgac ggtcaaggtc ctgggaggca gcaacaacag cggcgccgcc           540

gagtcgatgg ggactgcaag gcgggtagcg caggactttc agttcgacca cgtgttctgg           600

tctgtggaga cgccggacgc gtgcggcgcg accccccgcga cgcaggcaga cgtgttccgg          660

acgatcgggt acccgctggt gcagcacgcg ttcgacgggt tcaactcgtg cttgtttgcg          720

tacgggcaga cagggagcgg gaagatgtac acgatgatgg cgcggacgt gagcgcgctt           780

agtggtgagg gcaacggcgt gacgccgcgg atctgcctgg agatctttgc gcggaaggcg          840

agcgtggagg cgcagggca ctcgcggtgg atcgtggagc tggggtacgt ggaggtgtac           900

aacgagcgcg tgtcggacct gcttgggaag cggaagaagg gtgtgaaggg cggcggcgag          960

gaggtgtacg tggacgtgcg cgagcacccg agccgcggcg tgttcctgga ggggcagcgg          1020

ctggtggagg ttgggagcct ggacgatgtt gtgcggctga tcgagatcgg caacggcgtg          1080
```

```
cggcacaccg cttcaacgaa gatgaacgac cggagcagcc ggagccacgc gatcatcatg      1140

ctgctgctgc gcgaggagcg gacgatgacg acgaagagcg gggagacgat ccgtactgcc      1200

ggcaagagca gccgcatgaa ccttgtggac cttgcggggt ctaagcgcgt ggcgcagtcg      1260

caggtggagg ggcagcagtt caaggaggcg acgcacatca acctgtcgct gacgacgctc      1320

gggcgcgtga tcgacgtgct cgcggacatg gcgacgaagg gtgcgaaggc gcagtacagc      1380

gttgcgccgt ccgcgactc gaagctgacg ttcatcctga aggactcgct tggcgggaac      1440

tcgaagacgt tcatgatcgc gactgtgagc ccgagcgcgc tgaactacga ggagacgctg      1500

agcacgctgc ggtacgcgtc gcgcgcgcgc gacattgtga atgttgcgca ggtgaacgag      1560

gacccgcgcg cacggcggat ccgcgagctg gaggagcaga tggaggacat gcggcaggcg      1620

atggctggcg gcgaccccgc gtacgtgtcg gagctgaaga agaagcttgc gctgctggag      1680

tcggaggcgc agaagcgtgc ggcggacctg caggcgctgg agagggagcg ggagcacaac      1740

caggtgcagg agcggctgct gcgcgcgacg gaggcggaga agagcgagct ggagtcgcgt      1800

gcggctgcgc tgcaggagga gatgaccgcg actcgacggc aggcggacaa gatgcaggcg      1860

ctgaacctgc ggctgaagga agagcaggcg cgcaaggagc gcgagctgct gaaagagatg      1920

gcgaagaagg acgccgcgct ctcgaaggtt cggcaacgca aagacgccga gatagcaagc      1980

gagcgcgaga agctggagtc gaccgtggcg cagctggagc gtgagcagcg cgagcgcgag      2040

gtggctctgg acgcattgca gacgcaccag agaaagctgc aggaagcgct cgagagctct      2100

gagcggacag ccgcggaaag ggaccagctg ctgcagcagc taacagagct tcagtctgag      2160

cgtacgcagc tatcacaggt tgtgaccgac cgcgagcggc ttacacgcga cttgcagcgt      2220

attcagtacg agtacgggga aaccgagctc gcgcgagacg tggcgctgtg cgccgcgcag      2280

gagatggagg cgcgctacca cgctgctgtg tttcacctgc aaacgctcct ggagctcgca      2340

accgagtggg aggacgcact ccgcgagcgt gcgcttgcag agcgtgacga agccgctgca      2400

gccgaacttg atgccgcagc ctctacttcc caaaacgcac gtgaaagcgc ctgcgagcgg      2460

ctaaccagcc ttgagcagca gcttcgtgac tccgaggagc gcgctgcgga gctgatgcgg      2520

aagttagagg cgactgctgc tgcgaagtcg tcggcggagc aggaccgcga gaacacgagg      2580

gccacgttgg agcagcagct tcgcgaatcc gaggagcacg ctgcggagct gaaggcccag      2640

ctggagtcca ctgctgctgc gaagacgtcg gcggagcagg accgcgagaa cacgagggcc      2700

gcgttggagc agcggcttcg cgaatccgag gagcgcgctg cggagctggc gagccagctg      2760

gaggccactg ctgctgcgaa gtcgtcggcg gagcaggacc gcgagaacac gagggccacg      2820
```

ctagagcagc agcttcgcga atccgaggcg cgcgctgcgg agctggcgag tcagctggag          2880

tccactgctg ctgcgaagtc gtcggcggag caggaccgcg agaacacgag ggccacg             2937


<210>  3
<211>  563
<212>  DNA
<213>  Leishmania donovani

<400>  3
tcgtggccct cgtgttctcg cggtcctgct ccatcgcgga cttaacagca gcagtgctct            60

ttagccgcgc tgccagctcc gcagcgcgga cctcagcgag ccgcaaccgc tcctccaagg           120

tggccctcgt gttctcacgc tcctgctcca ccgacgtctt cgccgcagca gcggcttcca           180

gctgcgcagc cagctccgca gcgcgcgcct cggattcgcg gagctgctgc tccaaggcgg           240

ccctcgtcct ctcacgctcc tgctccaccg ccgtcttcgc agcagcagtg gcctccagca           300

ctcctgccag ctccgcagcg cgcacctcag caatacgaag tcgttcctcc aaggtggccc           360

tcgtcctctc gcggtcctgc tctaccaaat tcttcgcaga agcagtcgcc tccagtttgc           420

gagccagctc cgcagcgcgc ccctccagag ccgtcctcgt cttctcacgc tcctgctcca           480

ccgacgtctt cgcagcagca gtggcctcca gctcggcttt cagctccgca gcgcgcgtct           540

cggagtcacg aagctgctgc tca                                                   563


<210>  4
<211>  466
<212>  DNA
<213>  Leishmania donovani

<400>  4
gagcagcagc ttcgtgactc cgaggagcgc gctgcggagc tgatgcggaa gttagaggcg            60

actgctgctg cgaagtcgtc ggcggagcag gaccgcgaga acacgagggc cacgttggag           120

cagcagcttc gcgaatccga ggagcacgct gcggagctga aggcccagct ggagtccact           180

gctgctgcga agacgtcggc ggagcaggac cgcgagaaca cgagggccgc gttggagcag           240

cggcttcgcg aatccgagga gcgcgctgcg gagctggcga ccagctgga ggccactgct            300

gctgcgaagt cgtcggcgga gcaggaccgc gagaacacga gggccacgct agagcagcag           360

cttcgcgaat ccgaggcgcg cgctgcggag ctggcgagtc agctggagtc cactgctgct           420

gcgaagtcgt cggcggagca ggaccgcgag aacacgaggg ccacga                          466


<210>  5

<211> 187
<212> PRT
<213> Leishmania donovani

<400> 5

Glu Gln Gln Leu Arg Glu Ser Glu Ala Arg Ala Ala Glu Leu Lys Ala
1               5                   10                  15


Glu Leu Glu Ala Thr Ala Ala Ala Lys Thr Ser Val Glu Gln Glu Arg
                20                  25                  30


Glu Lys Thr Arg Thr Ala Leu Glu Gly Arg Ala Ala Glu Leu Ala Arg
        35                  40                  45


Lys Leu Glu Ala Thr Ala Ser Ala Lys Asn Leu Val Glu Gln Asp Arg
        50                  55                  60


Glu Arg Thr Arg Ala Thr Leu Glu Glu Arg Leu Arg Ile Ala Glu Val
65                  70                  75                  80


Arg Ala Ala Glu Leu Ala Gly Val Leu Glu Ala Thr Ala Ala Ala Lys
                85                  90                  95


Thr Ala Val Glu Gln Glu Arg Glu Arg Thr Arg Ala Ala Leu Glu Gln
                100                 105                 110


Gln Leu Arg Glu Ser Glu Ala Arg Ala Ala Glu Leu Ala Ala Gln Leu
        115                 120                 125


Glu Ala Ala Ala Ala Ala Lys Thr Ser Val Glu Gln Glu Arg Glu Asn
        130                 135                 140


Thr Arg Ala Thr Leu Glu Glu Arg Leu Arg Leu Ala Glu Val Arg Ala
145                 150                 155                 160


Ala Glu Leu Ala Ala Arg Leu Lys Ser Thr Ala Ala Val Lys Ser Ala
                165                 170                 175


Met Glu Gln Asp Arg Glu Asn Thr Arg Ala Thr
                180                 185


<210> 6
<211> 155
<212> PRT

<213> Leishmania donovani

<400> 6

Glu Gln Gln Leu Arg Asp Ser Glu Glu Arg Ala Ala Glu Leu Met Arg
1               5                   10                  15


Lys Leu Glu Ala Thr Ala Ala Ala Lys Ser Ser Ala Glu Gln Asp Arg
            20                  25                  30


Glu Asn Thr Arg Ala Thr Leu Glu Gln Gln Leu Arg Glu Ser Glu Glu
        35                  40                  45


His Ala Ala Glu Leu Lys Ala Gln Leu Glu Ser Thr Ala Ala Ala Lys
    50                  55                  60


Thr Ser Ala Glu Gln Asp Arg Glu Asn Thr Arg Ala Ala Leu Glu Gln
65                  70                  75                  80


Arg Leu Arg Glu Ser Glu Glu Arg Ala Ala Glu Leu Ala Ser Gln Leu
            85                  90                  95


Glu Ala Thr Ala Ala Ala Lys Ser Ser Ala Glu Gln Asp Arg Glu Asn
            100                 105                 110


Thr Arg Ala Thr Leu Glu Gln Gln Leu Arg Glu Ser Glu Ala Arg Ala
        115                 120                 125


Ala Glu Leu Ala Ser Gln Leu Glu Ser Thr Ala Ala Ala Lys Ser Ser
    130                 135                 140


Ala Glu Gln Asp Arg Glu Asn Thr Arg Ala Thr
145                 150                 155


<210> 7
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Sequence

<400> 7
cggcgcgtcg gtgtctttga t                                             21


<210> 8

```
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Synthetic Sequence

<400>   8
aggtccgccg cacgcttctg                                               20


<210>   9
<211>   22
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Synthetic Sequence

<400>   9
gcgggaactc gaagacgttc at                                            22


<210>   10
<211>   21
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Synthetic Sequence

<400>   10
gagcagcagc ttcgtgactc c                                             21


<210>   11
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Synthetic Sequence

<400>   11
cgtggccctc gtgttctcgc                                               20


<210>   12
<211>   955
<212>   PRT
<213>   Unknown

<220>
<223>   Synthetic sequence from US patents 5411865 and 5719263

<400>   12
```

```
Met His Pro Ser Thr Val Arg Arg Glu Ala Glu Arg Val Lys Val Ser
1               5                   10                  15


Val Arg Val Arg Pro Leu Asn Glu Arg Glu Asn Asn Ala Pro Glu Gly
                20                  25                  30


Thr Lys Val Thr Val Ala Ala Lys Gln Ala Ala Ala Val Val Thr Val
            35                  40                  45


Lys Val Leu Gly Gly Ser Asn Asn Ser Gly Ala Ala Glu Ser Met Gly
        50                  55                  60


Thr Ala Arg Arg Val Ala Gln Asp Phe Gln Phe Asp His Val Phe Trp
65                  70                  75                  80


Ser Val Glu Thr Pro Asp Ala Cys Gly Ala Thr Pro Ala Thr Gln Ala
                85                  90                  95


Asp Val Phe Arg Thr Ile Gly Tyr Pro Leu Val Gln His Ala Phe Asp
            100                 105                 110


Gly Phe Asn Ser Cys Leu Phe Ala Tyr Gly Gln Thr Gly Ser Gly Lys
            115                 120                 125


Thr Tyr Thr Met Met Gly Ala Asp Val Ser Ala Leu Ser Gly Glu Gly
    130                 135                 140


Asn Gly Val Thr Pro Arg Ile Cys Leu Glu Ile Phe Ala Arg Lys Ala
145                 150                 155                 160


Ser Val Glu Ala Gln Gly His Ser Arg Trp Ile Val Glu Leu Gly Tyr
                165                 170                 175


Val Glu Val Tyr Asn Glu Arg Val Ser Asp Leu Leu Gly Lys Arg Lys
            180                 185                 190


Lys Gly Val Lys Gly Gly Gly Glu Glu Val Tyr Val Asp Val Arg Glu
        195                 200                 205


His Pro Ser Arg Gly Val Phe Leu Glu Gly Gln Arg Leu Val Glu Val
    210                 215                 220


Gly Ser Leu Asp Asp Val Val Arg Leu Ile Glu Ile Gly Asn Gly Val
```

Arg His Thr Ala Ser Thr Lys Met Asn Asp Arg Ser Ser Arg Ser His
                245                    250                    255

Ala Ile Ile Met Leu Leu Leu Arg Glu Glu Arg Thr Met Thr Thr Lys
                260                    265                    270

Ser Gly Glu Thr Ile Arg Thr Ala Gly Lys Ser Ser Arg Met Asn Leu
                275                    280                    285

Val Asp Leu Ala Gly Ser Glu Arg Val Ala Gln Ser Gln Val Glu Gly
                290                    295                    300

Gln Gln Phe Lys Glu Ala Thr His Ile Asn Leu Ser Leu Thr Thr Leu
305                    310                    315                    320

Gly Arg Val Ile Asp Val Leu Ala Asp Met Ala Thr Lys Gly Ala Lys
                325                    330                    335

Ala Gln Tyr Ser Val Ala Pro Phe Arg Asp Ser Lys Leu Thr Phe Ile
                340                    345                    350

Leu Lys Asp Ser Leu Gly Gly Asn Ser Lys Thr Phe Met Ile Ala Thr
                355                    360                    365

Val Ser Pro Ser Ala Leu Asn Tyr Glu Glu Thr Leu Ser Thr Leu Arg
                370                    375                    380

Tyr Ala Ser Arg Ala Arg Asp Ile Val Asn Val Ala Gln Val Asn Glu
385                    390                    395                    400

Asp Pro Arg Ala Arg Arg Ile Arg Glu Leu Glu Glu Gln Met Glu Asp
                405                    410                    415

Met Arg Gln Ala Met Ala Gly Gly Asp Pro Ala Tyr Val Ser Glu Leu
                420                    425                    430

Lys Lys Lys Leu Ala Leu Leu Glu Ser Glu Ala Gln Lys Arg Ala Ala
                4